WHAT IS CLAIMED IS:

1. An aliphatic polymer having a ketone group and ether bonding in its main chain, comprising a structural unit represented by the following Formula (1) and a structural unit represented by the following Formula (2),

Formula (1)

Formula (2)

wherein Ra and Rb each independently represents a substituted or unsubstituted divalent aliphatic hydrocarbon group; Rc represents a substituted or unsubstituted divalent aliphatic hydrocarbon group having an ether bonding in a terminal thereof, or a single bond; n1 represents an integer of 1 or more; n2 represents an integer of 0 or more, and n1 + n2 ranges from 2 to 1,000.

- 2. The polymer according to claim 1, wherein, in the structural units represented by the Formulae (1) and (2), each of Ra and Rb is CH₂, and Rc is a single bond.
- 3. The polymer according to claim 1, wherein, in the structural units

represented by the Formulae (1) and (2), each of Ra and Rb is CH_2 , and Rc is represented by $-(CH_2)m-O$, wherein m represents an integer of 1 to 20.

- 4. The polymer according to any one of claims 1 to 3, wherein a weight average molecule weight is in a range of 74 to 1,000,000.
- 5. The polymer according to any one of claims 1 to 4, wherein the terminal group is selected from a group comprising —OH, —COOH, —COOR, —COX, —NH₂ and NCO, wherein R represents a substituted or unsubstituted hydrocarbon group, and X represents a halogen atom.
- 6. The polymer according to any one of claims 1 to 5, wherein the polymer has a cross-linking structure.
- 7. The polymer according to any one of claims 1 to 6, wherein a ratio of a number of the ether bonds to a number of the ketone groups, represented by ether bonds/ketone groups, is in a range of 0.01 to 100.
- 8. The polymer according to any one of claims 1 to 7, substantially structured as a repeating unit of the structural unit represented by the Formula (1).
- 9. The polymer according to any one of claims 1 to 8, wherein the polymer is obtained by conducting a polymerization-reaction of a polyhydric alcohol as a raw material in a presence of a catalyst.

10. An aliphatic polymer having a ketone group and ether bonding in its main chain, wherein the aliphatic polymer having a ketone group and ether bonding in its main chain comprises structural units represented by the following Formula (1) and the following Formula (3) and may contain structural units represented by the following Formula (2):

Formula (1)

Formula (2)

Formula (3)

$$-\left(\left(CR_{1}R_{2}\right)_{k}O\right)_{l}$$

wherein Ra and Rb each independently represents a substituted or unsubstituted divalent aliphatic hydrocarbon group; Rc represents a substituted or unsubstituted divalent aliphatic hydrocarbon group having ether bonding in a terminal thereof, or a single bond; R1 and R2 each independently represents H or an alkyl group; n1, k and l each independently represents an integer of 1 or more; n2 represents an integer of 0 or more; and n1 + n2 and 1 each independently

represents an integer in a range of 1 to 1000.

11. A resin composition, comprising a structural unit represented by the following Formula (1) as a component:

Formula (1)

wherein Ra and Rb each independently represents a substituted or unsubstituted divalent aliphatic hydrocarbon group; Rc represents a substituted or unsubstituted divalent aliphatic hydrocarbon group having an ether bonding in a terminal thereof, or a single bond; n1 represents an integer of 1 or more; n1 represents 2 to 1000.

- 12. The resin composition according to claim 11, further comprising an electrically conductive powder.
- 13. The resin composition according to claim 12, wherein the electrically conductive powder is metal fine particles.
- 14. The resin composition according to claim 12, wherein the electrically conductive powder is carbon nanotubes.
- 15. The resin composition according to claim 12, wherein carbon nanotubes

modified by a functional group, which conducts a polymerization-reaction with the aliphatic polymer having the ketone group and ether bonding in its main chain, is used as the electrically conductive powder.

16. The resin composition according to claim 15, wherein the functional group is a carboxylic acid.